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A New Cavernicolous Phalangid, *Sabacon akiyoshiensis* n. sp.  
from Japan

*With 2 Text-figures*

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(Communicated by K. TAKEWAKI)

The purpose of this paper is to report the discovery of a new cavernicolous phalangid, *Sabacon akiyoshiensis* n. sp. in Japan. The specimens were collected by Mr. Goro Okafuji of Ōmine Senior High School, Yamaguchi Pref. and his students in Satoyamase-no-ana, a cave located in Akiyoshidai.

Suborder Dyspnoi (Hansen and Soerensen)

Family Ischyropsalidae Simon

*Sabacon akiyoshiensis* n. sp.

(Figs. 1 and 2)

*Male*: Body very small, dorsal integument soft and dorsum of body with somewhat faint irregular outlines. Anterior margin of cephalothorax notched in front of eye tubercle. Scent gland at lateral portion of cephalothorax, above the first coxa, opening clear. Eye tubercle slightly separated from the anterior margin of cephalothorax. The tubercle low, broader than long, the carinae unarmed. Cephalothorax smooth, except for a median pair of prominent spines on the last thoracic segment. Abdominal dorsal segments 1 to 8 each free, with a slightly chitinized broadly oval patch bearing small hair-tipped granules, arranged more or less in one or two rows. Coxae of all legs and genital operculum thickly covered with long spine-like hairs. Sternites each bearing a row of short hairs on the anterior margin.

*Chelicera*: Proximal segment 0.3 mm long, 0.17 mm wide; distal segment 0.46 mm long, 0.22 mm wide at widest portion. Proximal segment stout, armed above with five to six scattered long spine-like hairs, and with a transverse row of five similar hairs at the anterior edge. There are five lyriform fissures on the mesal surface of the segment. The fissures lie perpendicularly to the longitudinal axis of the segment. Distal segment likewise stout, clothed dorsally

with long spine-like hairs; the proximo-dorsal margin produced into a low longitudinal process bearing a thick covering of short hairs, and there is a blunt tubercle at the base of the process. The claws bent mesally, armed with numerous long comb-like spines on the inner claws.

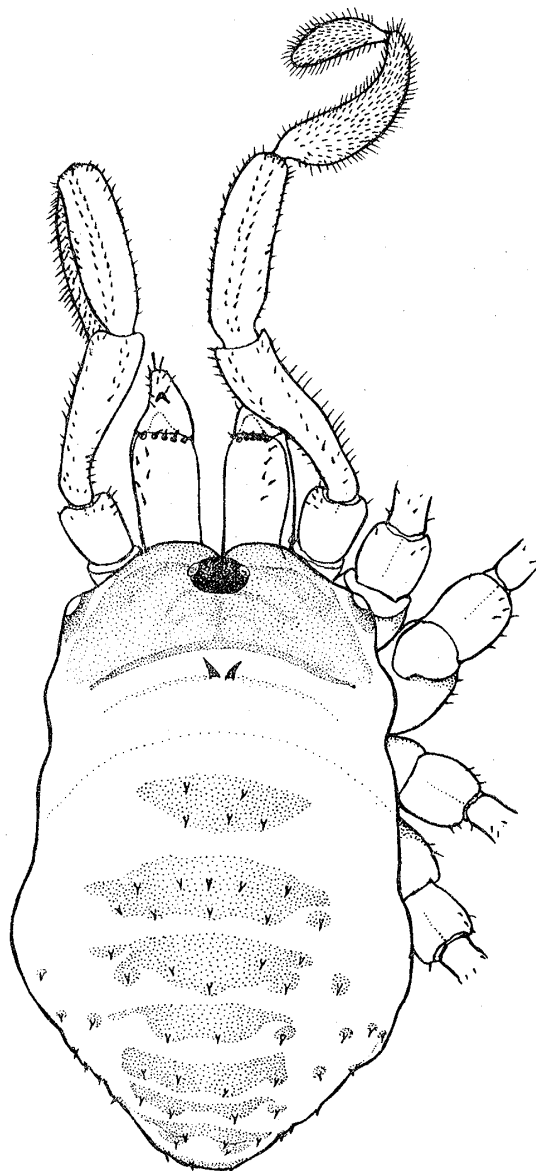


Fig. 1. *Sabacon akiyoshiensis* n. sp. Dorsal view of male. 45×

Palpus: Stout, longer than body, thickly set throughout with hairs. Trochanter short, cylindrical, clothed with a few short spine-like hairs distally above and below. Femur widened distally, about twice as long as trochanter, armed above with short but strong spine-like hairs, and ventrally and mesally with longer hairs. Patella swollen, widest at middle portion, nearly as long as femur,

studded above with two longitudinal rows of strong spine-like hairs and mesally and laterally with short hairs, and the segment of the patella bearing a longitudinal row of black teeth on the ventro-mesal margin. The number of teeth about ten, one of which situated at the distal end is biggest and unevenly bifid, followed by smaller ones and the last one at about two-thirds of the length of the segment smallest. Tibia a little longer than patella, large, gourd-shaped, swollen basally, curved mesally at tip where it is slightly excavated to receive the folded back tarsus; tibia and tarsus set densely with spine-like hairs; tarsal claw lacking.

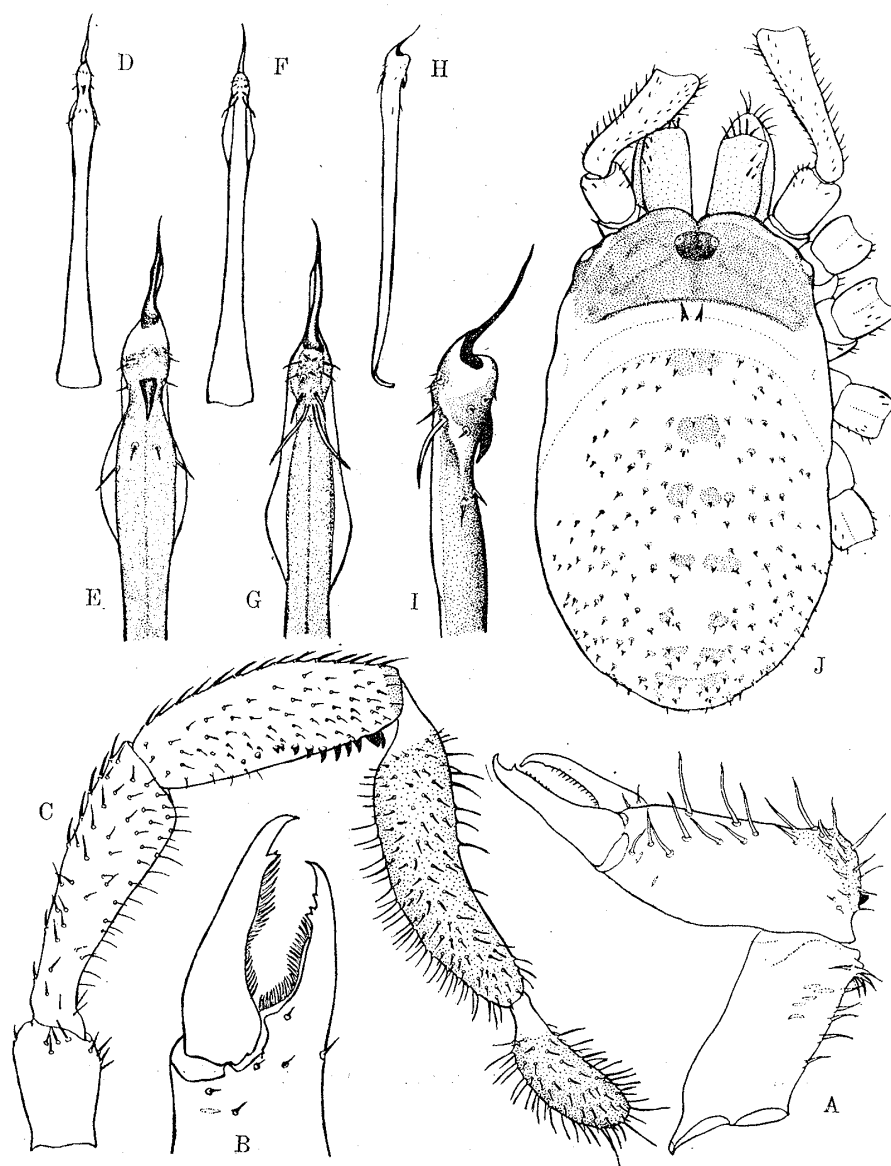


Fig. 2. *Sabacon akiyoshiensis* n. sp. A. Left, male chelicera, lateral view. 63× B. Cheliceral chela of male, dorsal view. 101× C. Left, male palpus, mesal view. 63× D-I. Penises; D, E. dorsal, F, G. ventral, and H, I. lateral views; D, F, H. 41×, E, G, I. 101× J. Dorsal view of female. 31×

Legs: Trochanters, femora, patellae, and tibiae smooth, with scattered spine-like hairs. Metatarsi and tarsi with more numerous large hairs than those on the four named parts and with a thick covering of very small hairs.

Color: Dorsum of body white to dull greyish white on soft integument and light to dark brown on hard integument. Eye tubercle dark brown to black. Venter concolorous with dorsum. Legs, trochanters whitish, femora light brown with whitish bases, second femur with 5-6, fourth femur with 3-4 white rings; the remaining segments light brown. Chelicera greyish white to light brown. Palpus, trochanter and femur greyish white, patella to tarsus brown to dark brown.

Penis: Corpus penis 0.84 mm long, 0.11 mm wide at widest basal end. Glans penis 0.06 mm long, 0.05 mm wide. Distal tube of glans 0.15 mm long. Penis pigmented. Corpus penis flattened dorso-ventrally, widest at the base and narrowest near the middle. Glans penis armed with numerous spines on both dorsal and ventral surfaces. On the dorsal surface (Fig. 2D, E) there is one stout, hook-shaped spine in the central position, one pair of short spines on the lateral margins, and a transverse row of six short spines at the anterior portion; on the ventral surface (Fig. 2F, G) there are four pairs of short spines at central region, one pair of markedly elongated, and more one pair of moderately long spines near the base. Distal tube of glans very long, sharply pointed.

*Female*: Body of female a little larger than that of male, ellipsoid in shape, rounded posteriorly. Abdominal dorsal segments each with one, two or more comparatively small, chitinized patches, and set with numerous hair-tipped granules. The granules more numerous than in the male. Chelicera, proximal segment 0.36 mm long, 0.17 mm wide; distal segment 0.52 mm long, 0.19 mm wide; distal segment lacking a proximo-dorsal process. Patella of palpus without armature.

*Measurements*: Male. Cephalothorax 0.8 mm wide, 0.5 mm long; abdomen 0.9 mm wide, 0.9 mm long. Total body length 1.4 mm.

Female. Cephalothorax 1.0 mm wide, 0.4 mm long; abdomen 1.0 mm wide, 1.3 mm long. Total body length 1.7 mm.

#### Palpus:

|            | Male                      |         | Female  |         |
|------------|---------------------------|---------|---------|---------|
|            | Width                     | Length  | Width   | Length  |
| Trochanter | 0.16 mm                   | 0.22 mm | 0.15 mm | 0.20 mm |
| Femur      | 0.08 (base)<br>0.18 (tip) | 0.50    | 0.14    | 0.64    |
| Patella    | 0.18                      | 0.50    | 0.16    | 0.62    |
| Tibia      | 0.14                      | 0.62    | 0.17    | 0.80    |
| Tarsus     | 0.10                      | 0.27    | 0.09    | 0.26    |
| Total      |                           | 2.11    |         | 2.52    |

## Length of Legs:

|        | Legs | Fem. | Pat. | Tib. | Metat. | Tars. | Total  |
|--------|------|------|------|------|--------|-------|--------|
| Male   | I    | 1.2  | 0.4  | 1.0  | 1.5    | 1.2   | 5.3 mm |
|        | II   | 1.8  | 0.5  | 1.6  | 2.1    | 2.3   | 8.3    |
|        | III  | 1.2  | 0.4  | 0.9  | 1.5    | 1.1   | 5.1    |
|        | IV   | 1.6  | 0.4  | 1.1  | 2.3    | 1.7   | 7.1    |
| Female | I    | 1.2  | 0.4  | 1.0  | 1.7    | 1.1   | 5.4    |
|        | II   | 1.8  | 0.5  | 1.5  | 2.1    | 2.5   | 8.4    |
|        | III  | 1.1  | 0.4  | 0.9  | 1.6    | 1.1   | 5.1    |
|        | IV   | 1.6  | 0.5  | 1.3  | 2.3    | 1.6   | 7.3    |

*Types:* Holotype male, Allotype female, and Paratypes: 1♂, 2♀ and 3 immatures, all collected in Satoyamase-no-ana (cave), Satoyamase, Ōmine-machi, Mine-shi, Yamaguchi Pref., Japan by Mr. Goro Okafuji and nine of his students on October 28th and November 23rd, 1962.

Types in the collection of the Zoological Laboratory of Hiroshima University.

*Habitat:* According to personal communication the collectors found the specimens under fallen stones in a cave. The place was dark and the air humid.

*Remarks:* This species is very closely related to *S. dentipalpe* Suzuki from which it is distinguished by its smaller size and differences in the genitalia and palpus.

The author wishes to record his thanks to the collectors listed above for their kind gifts of material.

## REFERENCE

Suzuki, S. 1949 J. Sci. Hiroshima Univ., Ser. B, Div. 1, **11**, 7.